

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-8. (canceled)

9. (currently amended) System for data processing a security critical activity in a secure management mode in a computer, which computer comprises a processor (10), handling devices (20, 28-38), memory storage means (14, 42), hereafter named resources; that the system comprises a security device (50) comprising a processor (52) and signal generators (SG_{PM}, SG_A), a number of control means, hereafter named switches (60), with signal receivers (SR_A, SR_{PM}) arranged respectively between the security device and pre-selected resources, that the switches contain information regarding accessibility to and from the resources, or parts of the resources, hereafter named resource ranges, characterized

in that the security processor is arranged to execute the security critical activity,

in that the switch controls requests from a processor of the computer processor, hereafter named the computer processor, to the resources or resource ranges depending on the information contained in the switch, and

in that in response to a call from the computer processor or the handling devices, the switches are activated by receiving a signal (SG_{PM}) from the security device, said signal (SG_{PM}) from the security device activating the switches to be in a condition i) enabling the security device and its security processor access to and from the resources or resource ranges selected by the security device and ii) denying the computer processor access to and from the resources or resource ranges selected by the security device,

in that the signal (SG_{PM}) can be generated only by the security device and

in that the security device comprises a signal generator (SG_A),

wherein, when a switch receives a signal (SG_A), together with new information (addresses, operation, data), the security device is able of altering the a content of the information of that switch.

10. (previously presented) System according to claim 9, characterized in that the information contained in the switches controls access to resources for requests from other possible processors contained in or connected to the computer.

11. (previously presented) System according to claim 9, characterized in that the switches comprise a signal receiver

(SRs) by which it can detect which source is handling the computer, and that the switch compares this with the resource which requests access to a resource or resource range controlled by the switch, and depending on the information in the switch, enables or denies access to that resource.

12. (previously presented) System according to claim 9, characterized in that the information in the switch, enabling the switch to control certain areas of the memory means, are allocated to be accessed by the processor of the security device only.

13. (previously presented) System according to claim 9, characterized in that the information in the switch enables the switch to control that certain resources are accessible by the computer processor when not in secure management mode, and only accessible by the security device when in secure management mode.

14. (currently amended) System according to claim 9, characterized in that the switches are hardware switches, the switches configured for i) a first normal mode wherein the computer processor has access to the resources, and ii) a second protected mode wherein the computer processor is denied access to the resources and the security processor is allowed access to the resources, and

said signal from the security device, enabling the security device and the security processor access to the resources and denying the computer processor access to the resources, changes the switches from the first normal mode into the second protected mode.

15. (currently amended) System for data processing a security critical activity in a secure management mode in a computer, comprising:

a computer comprising a computer processor (10), handling devices (20, 28-38), memory storage resources (14, 42);

a security device (50) comprising a security device processor (52), and signal generators (SG_{PM} , SG_A) inputting into the security device processor; and

switch control means (60) comprising switches and signal receivers (SR_A , SR_{PM}), the switches of the switch control means arranged respectively between the security device and pre-selected memory storage resources, wherein,

the switches of the switch control means contain information regarding accessibility to and from the memory storage resources, or ranges within the memory storage resources,

the security processor is arranged to execute the security critical activity,

the switch control means, depending on the information contained in the switches, controls requests from the computer

processor to the memory storage resources or ranges within the memory storage resources, and

in response to a call from the computer processor or the handling devices, the switches of the switch control means are activated by receiving a control signal (SG_{PM}) from the security device and the security device processor, said control signal (SG_{PM}) activating the switches to be in a condition

i) enabling the security device and the security device processor access to and from the memory storage resources or the ranges within the memory storage resources selected by the security device and

ii) denying the computer processor access to and from the memory storage resources or the ranges within the memory storage resource selected by the security device,

the control signal (SG_{PM}) can be generated only by the security device,

upon any switch receiving a signal (SG_A), together with new information (addresses, operation, data), the security device is configured to alter the a content of the information of that switch, and

the security device processor is a different processor than the computer processor.

16. (currently amended) System for data processing a security critical activity in a secure management mode in a computer, comprising:

a computer comprising a computer processor (10) connected to handling devices (20, 28-38) and to memory storage resources (14, 42);

a security device (50) comprising a security device processor (52), and signal generators (SG_{PM}, SG_A) inputting into the security device processor; and

switch control means (60) comprising switches and signal receivers (SR_A, SR_{PM}), the switches of the switch control means arranged between the security device and pre-selected memory storage resources, wherein,

the switches of the switch control means contain information regarding accessibility to and from the memory storage resources,

the security processor is arranged to execute the security critical activity,

the switch control means, based on the information contained in the switches, controls requests from the computer processor to the memory storage resources, and

in response to a call from the computer processor, the switches of the switch control means are activated by receiving a control signal (SG_{PM}) from the security device and the security

device processor, said control signal (SG_{PM}) activating the switches to be in a condition to

i) enable the security device and the security device processor access to and from the memory storage resources selected by the security device and

ii) deny the computer processor access to and from the memory storage resources selected by the security device,

the control signal (SG_{PM}) can be generated only by the security device,

upon any switch receiving a signal (SG_A), together with new information (addresses, operation, data), the security device is configured to alter ~~the a~~ content of the information of that switch, and

the security device processor is a different processor than the computer processor.

17. (new) System according to claim 15, wherein, the switches configured for i) a first normal mode wherein the computer processor has access to the resources, and ii) a second protected mode wherein the computer processor is denied access to the resources and only the security device processor has access to the resources, and

said control signal (SG_{PM}) activating the switches changes the switches from the first normal mode into the second protected mode.

18. (new) System according to claim 16, wherein,
the switches configured for i) a first normal mode
wherein the computer processor has access to the resources, and
ii) a second protected mode wherein the computer processor is
denied access to the resources and only the security device
processor has access to the resources, and

 said control signal (SG_{PM}) activating the switches
changes the switches from the first normal mode into the second
protected mode.

19. (new) System according to claim 9, wherein,
the switches each comprise a protection mode signal
receiver (SR) configured to receive said signal from the security
device activating the switches to be in the condition enabling
the security device and the security processor access to the
resources and denying the computer processor access to the
resources,

 upon reception of said signal from the security device
by the protection mode signal receiver, the protection mode
signal receiver reconfigures the switches into a protection mode
configuration allocating specific resources needed for executing
the security critical activity to the security processor and
denying the computer processor access to the specific resources,
and

upon the switches being placed in the protection mode configuration, the security processor executes the security critical activity.

20. (new) System according to claim 15, wherein, the switches each comprise a protection mode signal receiver (SR) configured to receive said signal from the security device activating the switches to be in the condition enabling the security device processor access to the resources and denying the computer processor access to the resources,

upon reception of said signal from the security device by the protection mode signal receiver, the switches being reconfigured into a protection mode configuration allocating specific resources needed for executing the security critical activity to the security device processor and denying the computer processor access to the specific resources, and

upon the switches being placed in the protection mode configuration, the security device processor executes the security critical activity.

21. (new) System according to claim 16, wherein, the switches each comprise a protection mode signal receiver (SR) configured to receive said signal from the security device activating the switches to be in the condition enabling

the security device processor access to the resources and denying the computer processor access to the resources,

upon reception of said signal from the security device by the protection mode signal receiver, the switches being reconfigured into a protection mode configuration allocating specific resources needed for executing the security critical activity to the security device processor and denying the computer processor access to the specific resources, and

upon the switches being placed in the protection mode configuration, the security device processor executes the security critical activity.